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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,218	03/31/2004	John H. Judge	S-5669	7337

7590 12/29/2004
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EXAMINER

SWARTHOUT, BRENT

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,218

Applicant(s)

JUDGE ET AL.

Examiner

Brent A Swarthout

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 1,2,4,5,6,7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkins, Jr. et al. in view of Hamilton et al.

Wilkins discloses desirability of providing guidance to a helicopter pilot comprising plural sensors for detecting flight and terrain database information (col. 5, lines 45-49, Fig.1), inherent processing unit for combining the terrain environment data and mission specific flight path data (col.2, lines 25-65), and output information to provide guidance to a helicopter pilot when near terrain (col.1, lines 35-50; col.4, lines 1-17), except for specifically stating that plural sensors sense environmental data.

Hamilton teaches desirability of using plural sensors (col.4, lines 29-39) to detect environmental conditions, such as detection of obstacles and other aircraft nearby (col.15, lines 18-21).

It would have been obvious to use environmental sensors as suggested by Hamilton in conjunction with a helicopter guidance display as suggested by Wilkins, in order to provide protection from other objects in addition to stored terrain obstacles.

Regarding claim 2, Wilkins (Fig. 1) and Hamilton (Fig.7) disclose display of aircraft state data.

Regarding claim 7, Hamilton teaches desirability of detecting objects using FLIR (col. 4, line 31).

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkens, Jr. et al. in view of Hamilton et al. and Cornelio et al.

Cornelio teaches desirability of alerting a pilot to the presence of unsafe landing areas when obstacles are detected (abstract).

It would have been obvious to alert a pilot when a landing zone was considered unsafe due to the presence of obstacles in a system as disclosed by Wilkens and Hamilton, in order that damage to aircraft and injury to passengers could have been avoided.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkens, Jr. et al. in view of Hamilton et al. and Hellsten.

Hellsten teaches desirability of using an ultra wide band radar for object detection (abstract).

It would have been obvious to use an ultra wide band radar as suggested by Hellsten in conjunction with a pilot guidance system as disclosed by Wilkens and Hamilton, in order to reduce interference (col.1, line 10).

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkens, Jr. et al. in view of Hamilton et al., Hellsten and Hall et al.

Hall teaches providing pilot guidance display (Fig.4) wherein the stored terrain database also includes known obstacle data, such as towers 20 (col. 4, lines 42-57).

It would have been obvious to include environmentally sensed data as suggested by Hamilton and Wilkens, using ultra wide band radar as suggested by Hellsten, to also include stored terrain and obstacle data as suggested by Hall, in order prevent collision with known obstacles.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Saban, D'Orso and Dunn disclose aircraft obstacle detection systems.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent A Swarthout whose telephone number is 571-272-2979. The examiner can normally be reached on M-F from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Brent Swarthout

Brent A Swarthout
Examiner
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